

Notice of Allowability

Application No.

10/623,025

Examiner

James L. Habermehl

Applicant(s)

SUZUKI, SHOJI

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2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 23 Aug 05.
2. ☒ The allowed claim(s) is/are 2-24 and 32-39, renumbered 1-31 respectively.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

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1. This Office action is in response to amendment filed 23 August 2005, which papers have been placed of record in the file.

2. Claims 2-24 and 32-39 are allowed over the prior art of record. The following is a statement of reasons for the indication of allowable subject matter:

Claim 2 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a load/unload disk drive comprising a securing mechanism configured to receive the suspension arm to load and unload the slider body, and a disk wherein the protrusion maintains the slider body with a positive pitch attitude during contact between the slider body and the data zone of the disk surface, as presented in the environment of claim 2. It is noted that the closest prior art, Kasamatsu et al., shows a positive pitch attitude maintaining protrusion similar to the claimed invention. However, Kasamatsu et al. fails to disclose a securing mechanism configured to receive the suspension arm to load and unload the slider body, and a disk wherein the protrusion maintains the slider body with a positive pitch attitude during contact between the slider body and the disk surface as claimed.

Claim 20 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a slider comprising a leading edge step having a non-sloping surface and a protrusion disposed on the leading edge step that extends beyond the air bearing surface and has a contoured leading edge, as presented in the environment of claim 2. It is noted that the closest prior art, Kasamatsu et al., shows a slider with a protrusion having a contoured leading edge similar to the claimed invention. However, Kasamatsu et al. fails to disclose a slider comprising a leading edge step having a non-sloping surface and a

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protrusion disposed on the leading edge step that extends beyond the air bearing surface and has a contoured leading edge as claimed.

Claim 32 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method comprising providing a slider with a first protrusion forward of the load pivot point, flying the slider in a load/unload disk drive, and maintaining a positive pitch angle of the slider during contacting the slider with the disk surface over a data zone, as presented in the environment of claim 32. It is noted that the closest prior art, Kasamatsu et al., shows a positive pitch attitude maintaining protrusion similar to the claimed invention. However, Kasamatsu et al. fails to disclose providing a slider with a first protrusion forward of the load pivot point, flying the slider in a load/unload disk drive, and maintaining a positive pitch angle of the slider during contacting the slider with the disk surface over a data zone as claimed.

Claim 36 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a method comprising determining a minimum pitch angle of operation for a slider, and determining a protrusion height directly proportional to a distance of the read/write element from the protrusion and the minimum pitch angle of the slider, as presented in the environment of claim 36. It is noted that the closest prior art, Kasamatsu et al., shows a positive pitch attitude maintaining protrusion similar to the claimed invention. However, Kasamatsu et al. fails to disclose determining a minimum pitch angle of operation for a slider, and determining a protrusion height directly proportional to a distance of the read/write element from the protrusion and the minimum pitch angle of the slider as claimed.

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James L. Habermehl whose telephone number is (571)272-7556.

The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571)272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Habermehl/jlh
31 Aug 05



DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600